## CLAIMS

What is claimed is:

1    1.     A method comprising:

2       starting execution of a basic input output system (BIOS), the BIOS having a

3   plurality of modules;

4       determining resources required by the plurality of modules;

5       scheduling execution of modules of the plurality of modules; and

6       dispatching the scheduled modules for execution.

1    2.     The method of claim 1, further comprising initializing a memory of the

2   platform after the scheduled modules are dispatched.

1    3.     The method of claim 1, further comprising calling a module of the plurality of

2   modules for execution during execution of another module of the plurality of

3   modules.

1    4.     The method of claim 3, wherein calling a module of the plurality of modules

2   further comprises:

3       saving a return address;

4       determining a physical address of the module;

5       executing an instruction stored at the physical address of the module; and

6       executing an instruction stored at the saved return address when the module

7   execution is complete.

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1  5.    The method of claim 4, wherein determining the physical address of the
2  module comprises looking up the physical address in an import table of the other
3  module.

1  6.    The method of claim 1, wherein a module of the plurality of modules
2  comprises:
3        a globally unique identifier (GUID) to identify the module;
4        a resource list to store information identifying resources needed by the
5  module to operate;
6        an import table to store physical addresses of a set of modules of the plurality
7  of modules that the module may call during execution;
8        a service that when executed performs a predetermined function;
9        an export table to store a value corresponding to a physical address of the
10  service; and
11        an interface operatively coupled to the GUID, resource list, the service, the
12  import table, and the export table, wherein the interface is addressable by a calling
13  agent via the GUID to provide the calling agent access to the resource list, the
14  service, the import table, and the export table.

1  7.    The method of claim 6, wherein the value stored by the export table is an
2  offset from a start address of the module.

1  8.    The method of claim 6, wherein the import table to store GUIDs of the set of
2  modules of the plurality of modules.

1     9.     The method of claim 1, further comprising:

2          starting execution of a first module of the plurality of modules;

3          determining whether the first module is chainable with another module of the

4 plurality of modules;

5          determining whether a hardware component associated with the first module

6 is present in the platform if the first module is chainable;

7          completing execution of the first module if the hardware component

8 associated with the first module is present in the platform; and

9          starting execution of a second module of the plurality of modules without

10 completing execution of the first module if the hardware component associated with

11 the first module is not present in the platform.


1     10.     The method of claim 9, wherein the first module includes a data structure to

2 store a physical address of the second module.


1     11.     The method of claim 9, further comprising:

2          determining whether a hardware component associated with the second

3 module of the plurality of modules is present in the platform if the first module is

4 chainable;

5          completing execution of the second module if the hardware component

6 associated with the second module is present in the platform;

7          determining whether a third module is chained to the second module if the

8 hardware component associated with the second module is not present in the

9 platform; and

10          executing the third module of the plurality of modules without completing

11 execution of the second module if third module is chained to the second module.

1   12.   The method of claim 11, wherein completing execution of the second module

2   further comprises returning to a calling agent that called the first module.

1   13.   The method of claim 1, further comprising:

2       executing a call made by a calling agent to a first module of the plurality of

3 modules, wherein the call is one of a set of calls, each call of the set of calls being

4 associated with a module of a set of modules of the plurality of modules, the

5 associations being dependent on a configuration of the platform;

6       starting execution of the first module of the plurality of modules in response to

7 the call;

8       determining which module of the set of modules is associated with the call;

9 and

10      starting execution of the module associated with the call.

1   14.   The method of claim 13, further comprising returning to the calling agent

2 when execution of the module associated with the call is complete.

1   15.   A machine readable medium containing instructions that when executed by a

2 machine, cause the machine to perform operations comprising:

3       starting execution of a BIOS, the BIOS having a plurality of modules;

4       determining resources required by the plurality of modules;

5       scheduling execution of modules of the plurality of modules; and

6       dispatching the scheduled modules for execution.

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1 16. The machine readable medium of claim 15, further comprising instructions

2 that when executed by the machine cause the machine to perform an operation of

3 initializing a memory of the machine after the scheduled modules are dispatched.

1 17. The machine readable medium of claim 15, further comprising instructions

2 that when executed by the machine cause the machine to perform an operation of

3 calling a module of the plurality of modules for execution during execution of another

4 module of the plurality of modules.

1 18. The machine readable medium of claim 17, wherein calling a module of the

2 plurality of modules further comprises instructions that when executed by the

3 machine cause the machine to perform operations comprising:

4  saving a return address;

5  determining a physical address of the module;

6  executing an instruction stored at the physical address of the module; and

7  executing an instruction stored at the saved return address when the module

8 execution is complete.

1 19. The machine readable medium of claim 15, wherein a module of the plurality

2 of modules comprises:

3  a globally unique identifier (GUID) to identify the module;

4  a resource list to store information identifying resources needed by the

5 module to operate;

6  an import table to store physical addresses of a set of modules of the plurality

7 of modules that the module may call during execution;

8  a service that when executed performs a predetermined function;

9       an export table to store a value corresponding to a physical address of the

10    service; and

11       an interface operatively coupled to the GUID, resource list, the service, the

12    import table, and the export table, wherein the interface is addressable by a calling

13    agent via the GUID to provide the calling agent access to the resource list, the

14    service, the import table, and the export table.

1    20.    The machine readable medium of claim 15, further comprising instructions

2    that when executed by the machine cause the machine to perform operations

3    comprising

4       starting execution of a first module of the plurality of modules;

5       determining whether the first module is a chainable with another module of

6    the plurality of modules;

7       determining whether a hardware component associated with the first module

8    is present in the machine if the first module is chainable;

9       completing execution of the first module if the hardware component

10    associated with the first module is present in the machine; and

11       starting execution of a second module of the plurality of modules without

12    completing execution of the first module if the hardware component associated with

13    the first module is not present in the machine.

1    21.    The machine readable medium of claim 20, further comprising instructions

2    that when executed by the machine cause the machine to perform operations

3    comprising:

4    determining whether a hardware component associated with the second

5    module of the plurality of modules is present in the machine if the first module is

6    chainable;

7    completing execution of the second module if the hardware component

8    associated with the second module is present in the machine;

9    determining whether a third module is chained to the second module if the

10   hardware component associated with the second module is not present in the

11   machine; and

12   executing the third module of the plurality of modules without completing

13   execution of the second module if third module is chained to the second module.


1    22.    The machine readable medium of claim 21, wherein completing execution of

2    the second module further comprising instructions that when executed by the

3    machine cause the machine to perform an operation of returning to a calling agent

4    that called the first module.


1    23.    The machine readable medium of claim 15, further comprising instructions

2    that when executed by the machine cause the machine to perform operations

3    comprising:

4    executing a call made by a calling agent to a first module of the plurality of

5    modules, wherein the call is one of a set of calls, each call of the set of calls being

6    associated with a module of a set of modules of the plurality of modules, the

7    associations being dependent on a configuration of the machine;

8    starting execution of the first module of the plurality of modules in response to

9    the call;

10          determining which module of the set of modules is associated with the call;

11    and

12          starting execution of the module associated with the call.

1    24.     The machine readable medium of claim 23, further comprising instructions

2    that when executed by the machine cause the machine to perform an operation of

3    returning to the calling agent when execution of the module associated with the call

4    is complete.

1    25.     A system, comprising:

2          a plurality of hardware components;

3          a first memory device to store a BIOS, the BIOS having a plurality of

4    modules, the BIOS further including;

5                  means for determining resources required by the plurality of modules,

6                  means for scheduling execution of modules of the plurality of modules,

7    and

8                  means for dispatching scheduled modules for execution; and

9          a processor coupled to the plurality of hardware components and the first

10    memory device.

1    26.     The system of claim 25, wherein the BIOS further comprises means for

2    initializing a memory of the system after the scheduled modules are dispatched.

1    27.     The system of claim 25, wherein the BIOS further comprises means for

2    calling a module of the plurality of modules for execution during execution of another

3    module of the plurality of modules.

1  28.  The system of claim 27, wherein the means for calling a module of the

2  plurality of modules further comprises:

3       means for saving a return address;

4       means for determining a physical address of the module;

5       means for executing an instruction stored at the physical address of the

6  module; and

7       means for executing an instruction stored at the saved return address when

8  the module execution is complete.


1  29.  The system of claim 25, wherein a module of the plurality of modules

2  comprises:

3       a globally unique identifier (GUID) to identify the module;

4       a resource list to store information identifying resources needed by the

5  module to operate;

6       an import table to store physical addresses of a set of modules of the plurality

7  of modules that the module may call during execution;

8       a service that when executed performs a predetermined function;

9       an export table to store a value corresponding to a physical address of the

10  service; and

11       an interface operatively coupled to the GUID, resource list, the service, the

12  import table, and the export table, wherein the interface is addressable by a calling

13  agent via the GUID to provide the calling agent access to the resource list, the

14  service, the import table, and the export table.


1  30.  The system of claim 25, wherein the BIOS further comprises:

2    means for starting execution of a first module of the plurality of modules;

3    means for determining whether the first module is a chainable with another

4    module of the plurality of modules;

5    means for determining whether a hardware component of the plurality of

6    hardware components that is associated with the first module is present in the

7    system if the first module is chainable;

8    means for completing execution of the first module if the hardware

9    component associated with the first module is present in the system; and

10   means for starting execution of a second module of the plurality of modules

11   without completing execution of the first module if the hardware component

12   associated with the first module is not present in the system.


1    31.   The system of claim 30, wherein the BIOS further comprises:

2    means for determining whether a hardware component associated with the

3    second module of the plurality of modules is present in the system if the first module

4    is chainable;

5    means for completing execution of the second module if the hardware

6    component associated with the second module is present in the system;

7    means for determining whether a third module is chained to the second

8    module if the hardware component associated with the second module is not

9    present in the system; and

10   means for executing the third module of the plurality of modules without

11   completing execution of the second module if third module is chained to the second

12   module.

1    32.    The system of claim 31, wherein the means for completing execution of the

2    second module further comprises means for returning to a calling agent that called

3    the first module.

1    33.    The system of claim 28, wherein the BIOS further comprises:

2           means for executing a call made by a calling agent to a first module of the

3    plurality of modules, wherein the call is one of a set of calls, each call of the set of

4    calls being associated with a module of a set of modules of the plurality of modules,

5    the associations being dependent on a configuration of the system;

6           means for starting execution of the first module of the plurality of modules in

7    response to the call;

8           means for determining which module of the set of modules is associated with

9    the call; and

10          means for starting execution of the module associated with the call.

1    34.    A system, comprising:

2           a plurality of hardware components;

3           a first memory device to store a BIOS, the BIOS comprising:

4               a plurality of modules, each module of the plurality of modules to

5    provide at least one service;

6               a core operatively coupled to the plurality of modules, wherein the core

7    to select for execution a set of module from the plurality of modules;

8           a processor coupled to the plurality of hardware components and the first

9    memory device.

1    35.    The system of claim 34, wherein during execution of a first module of the

2    plurality of modules, the first module to selectively call a second module of the

3    plurality of modules for execution.


1    36.    The system of claim 35, wherein the first module comprises an import table to

2    store a physical address of the second module, the first module further to store a

3    return address in a register of the processor in calling the second module.


1    37.    The system of claim 34, wherein a module of the plurality of modules

2    comprises:

3            a globally unique identifier (GUID) to identify the module;

4            a resource list to store information identifying resources needed by the

5    module to operate;

6            an import table to store physical addresses of a set of modules of the plurality

7    of modules that the module may call during execution;

8            a service that when executed performs a predetermined function;

9            an export table to store a value corresponding to a physical address of the

10    service; and

11            an interface operatively coupled to the GUID, resource list, the service, the

12    import table, and the export table, wherein the interface is addressable by a calling

13    agent via the GUID to provide the calling agent access to the resource list, the

14    service, the import table, and the export table.


1    38.    The system of claim 34, wherein a set of modules of the plurality of modules

2    have identical global unique identifiers (GUIDs).

1     39.     The system of claim 38, wherein during execution of a first module of the set

2     of modules, the processor to complete execution of the first module when a first

3     hardware component is associated with the first module is present in the system, the

4     first hardware component being one of the plurality of hardware components.


1     40.     The system of claim 39, wherein the first module to call a second module of

2     the set of modules when the first hardware component is not present in the system..


1     41.     The system of claim 34, wherein during execution of a first module of the

2     plurality of modules, the first module to call a second module of the plurality of

3     modules to perform a service, the second module to call a third module as a

4     function of a configuration of the system, the third module being one of a set of

5     modules of the plurality of modules each being associated with a different hardware

6     component of the plurality of hardware components that provide the service called

7     by the first module.